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10/037,766

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Chaoying Zhang

AUDIP009

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02/22/2006

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EXAMINER

PENDLETON, DIONNE

ART UNIT

PAPER NUMBER

2646

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/037,766

Applicant(s)

ZHANG ET AL.

Examiner

Dionne N. Harvey

Art Unit

2646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 U.S.C. 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims **1-17, 19-23 and 25-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Weidner (U.S. 6,556,686)** in view of **alSafadi et al. (U.S. 6,467,088)**.

*Regarding claim 1,*

Weidner teaches a method for upgrading a hearing aid device, the method comprising: in **column 4, lines 14-48**, Weidner teaches that the hearing aid device is provided with a unique identification number in the memory of said device to prevent unauthorized or inexpert usage of the hearing aid device; Weidner further teaches that during a validation stage of software upgrade, the identification number of the hearing device is accessed so as to enable/disable a software upgrade, thus constituting "reading device information from the hearing device".

Since a serial number is understood in the art as being a number that is one of a series and is used for identification, said unique identification number reads on "a serial number", as claimed. Additionally, it is well known in the art that a serial number is used to indicate, among other things, the particular "model" of a device. Therefore, said

unique identification number is also interpreted as reading on “a model identification” as claimed.

In **column 6, lines 18-30**, Weidner teaches receiving a software key from the programming device **11** for enabling certain properties of the hearing device, which reads on “subsequently receiving upgrade data from the hearing aid upgrade server via the network, the upgrade data being...based on the device information; and upgrading the hearing aid device based on the upgrade data.”

**Column 6, lines 14-16**, Weidner teaches that the hearing device **1** is connected to a programming device (computer) **11**, which reads on “hearing aid upgrade server”, via a bidirectional data line **14**, which reads on “a network”; said bidirectional data line inherently teaches that hearing device information may be sent to the upgrade server **11** via a network **14**. Weidner does not clearly teach that the device information, which is sent to the network from the hearing device, includes the model and serial number of the device.

AlSafadi teaches, in **column 4, lines 15-17 and lines 44-47**, a method for upgrading an electronic device via network, wherein an electronic device, which is requesting a software upgrade, sends to a reconfiguration manager (computer) serial number information or some other identifying data, thereby permitting the reconfiguration manager to isolate software components available to that specific electronic device.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Weidner and alSafadi, such that the unique

identification number of the hearing device **1** is sent to the programming device **11** via network connection **14**, as an alternative method for validating a proposed software upgrade or to determine which software upgrades are compatible to the specific hearing device.

*Regarding claim 2,*

in **column 5, lines 25-30**, Weidner teaches that the upgrading comprises programming the device in accordance with the data.

*Regarding claim 3,*

shown in **figure 1** Weidner teaches a programming device **11** which is now interpreted as reading on the “local programming station” of the claim.

Weidner does not teach that the local programming station is operatively connected to a separate hearing aid upgrade server via a network connection.

In **column 3, lines 27-42, specifically lines 37-38**, alSafadi teaches that a listing of compatible software components, reading on “upgrade server”, may be remotely located and accessible by the local programming device (computer) **212** via a network connection **214**, thereby being in operative connection, as claimed; also see **figure 3**.

*Regarding claim 4,*

in **column 2, lines 41-44**, Weidner teaches that the local programming station is provided at a hearing aid dispensing office.

*Regarding claim 5,*

Weidner teaches that there is a recognized need in the art for providing program adjustments in hearing aid devices thereby adapting to changing hearing behavior of its' wearer over time (see **column 3, lines 43-50**), which reads on "wherein the upgrading comprises programming the reprogrammable memory..."

*Regarding claim 6,*

Weidner does not clearly teach that the programming of the hearing aid device operates to store an algorithm in the hearing aid device so as to enhance sound signals. However, the Examiner takes Official Notice that programming via storage of algorithms is well known in the art and would have been obvious in computer-to-computer communications over a network, since algorithms permit the compression of data for the distribution of software across a computer network (see previously cited reference **Goldman 6,615,405**).

*Regarding claims 7-9,*

The combination of alSafadi and Weidner teaches that the network is the Internet and the method is implemented by computer.

*Regarding claim 10,*

as set forth in the rejection of claims 1 and 3 above, the combination of Weidner and alSafadi teaches a method for upgrading a hearing aid device comprising: connecting the hearing aid device **(1)** to a programming system **(11)**; reading a unique identification number, which reads on "device information" from the hearing device, the device information including at least a model indication and a serial number; alSafadi teaches coupling the hearing aid programming system **(11)** to a remote upgrade server

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(210) through a network (214); and in **column 2, lines 34-52**, alSafadi teaches requesting the upgrade based upon the device information; receiving at the programming system the requested upgrade for the hearing aid device through the network and installing the requested upgrade in the hearing aid device whereby the device operates in accordance with the upgraded software. Both alSafadi and Weidner teach upgrading the electronic device via software.

*Regarding claim 11,*

in **columns 4-5**, alSafadi teaches determining whether the hearing aid device is suitable for upgrade based upon the device information.

*Regarding claims 12 and 13,*

in **column 4, lines 53-55**, Weidner teaches the use of a code word, reading on "password", which is required for entry to the hearing aid programming system.

*Regarding claim 14,*

Weidner appears to teach that the hearing device is reprogrammable (for support, see **column 3, lines 43-50** in the Weidner reference).

*Regarding claim 15,*

The combination of alSafadi and Weidner teaches that said programming of the reprogrammable memory operates to store upgraded software in the device, the software being used to enhance sound signals for the user.

*Regarding claim 16,*

alSafadi teaches that the network is the Internet.

*Regarding claim 17,*

alSafadi teaches that reading is performed by electronically reading the device information.

*Regarding claim 19,*

alSafadi teaches receiving a reconfiguration request and determining one or more device components that are required to implement the reconfiguration request from information supplied by the electronic device (**see, column 2, lines 28-37**), which reads on "requesting of the upgraded software send the device information to the remote hearing aid upgrade server"

*Regarding claim 21,*

in **column 5, lines 36-39**, Weidner teaches the incorporation of an error message for the person who adapts the hearing device to the patient. The Examiner has interpreted this disclosure as indirectly teaching that when no error has occurred, the fitting of the hearing device by the acoustician or otolaryngologist may continue and thusly be completed, which reads on "...displaying a notification message that the hearing device has been modified such that refitting is needed".

*Regarding claims 20,22 and 26,*

The combination of alSafadi and Weidner teaches a method for providing software to upgrade a hearing aid device from a remote hearing aid server, said method comprising:

In **column 6, lines 16-21 and lines 29-30**, Weidner teaches a validation step wherein a software upgrade is determined appropriate or inappropriate for a hearing aid



device based on the hearing device information; in **column 6, lines 29-30**, Weidner teaches that the appropriate software upgrade is sent to the hearing device ;

In **column 4, lines 33-47**, Weidner teaches that the manufacturer initially provides the hearing aid device with data as to what codeword/software key, reading on “device information”, may be used to facilitate new programming. In **column 6, lines 13-18**, Weidner teaches that prior to a software upgrade, a programming device sends the codeword/software key data, reading on “returned device information” to the hearing aid device, which reads on “sending returned device information to the requesting device”, where the “returned device information” is compared to the initially stored “device information”; and thereafter, the hearing aid device is upgraded in accordance with the appropriate software, provided that the “returned device information” matches the “device information”, as claimed.

Weidner does not clearly teach that:1.) a request for upgrade software is received from a requesting machine, or 2.) that device information for the hearing aid device is received from a requesting machine.

In **column 2, lines 27-29**, alSafadi teaches a request for upgraded software is received by a reconfiguration manager from the requesting machine; and in **column 4, lines 44-47**, alSafadi teaches that the reconfiguration manager also receives the serial number information of the requesting machine prior to upgrading software.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Weidner and alSafadi, such that the unique identification number of the hearing device **1** is sent to the programming device **11** via

network connection **14**, as an alternative method for validation of a proposed software upgrade or to determine which software upgrades are compatible to the specific hearing device.

*Regarding claim 23,*

alSafadi teaches that reading is performed by electronically reading the device information.

*Regarding claim 25,*

alSafadi teaches that the device information includes at least a model indication and a serial number.

*Regarding claim 27,*

the combination of alSafadi and Weidner, does not specifically teach that a password is required for entry to the hearing aid programming system. However, the Examiner takes Official Notice that the use of a password for access to a computer or to network servers, are well known in the art for the purpose of protection against unauthorized usage.

*Regarding claim 28,*

in **columns 4-5**, alSafadi teaches determining whether the hearing aid device is suitable for upgrade based upon the device information.

***Response to Arguments***

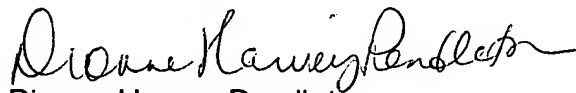
2. Applicant's arguments filed **3/14/05 & 4/11/05** have been fully considered but they are not persuasive for the reasons stated in the "Response to arguments" portion of the Advisory Action mailed on **4/11/2005**.

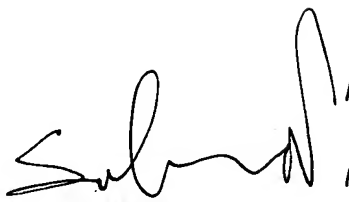
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne N. Harvey whose telephone number is 571-272-7497. The examiner can normally be reached on 9-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dionne Harvey Pendleton

  
**SUHAN N**  
**PRIMARY EXAMINER**